



\*\*FILE\*\*ID\*\*SCA

1 3

Version: 'V04-000'

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FACILITY: DSR (Digital Standard RUNOFF) / DSRPLUS

ABSTRACT:  
Definitions having to do with SCA (SCANT control area).

ENVIRONMENT: Compatible BLISS

AUTHOR: Rich Friday

CREATION DATE: 1978

MODIFIED BY:

|      |           |   |                  |
|------|-----------|---|------------------|
| 016  | REM00016  | Ray Marshall  | 16-November-1983 |
|      |           | Added macros with "f" within their names and defining cells   |                  |
|      |           | so they can be loaded by Ken's SAVRES module using macro      |                  |
|      |           | names instead of numeric offsets.                             |                  |
| 015  | REM00015  | Ray Marshall  | 7-November-1983  |
|      |           | Added 12 more cells to the case rules section to support case |                  |
|      |           | changing within the DEC multinational character set. This     |                  |
|      |           | also required renumbering the whole table!                    |                  |
| 014  | KFA00014  | Ken Alden   | 18-Sep-1983      |
|      |           | For DSRPLUS: added sca_margin_pad.                            |                  |
| 013A | KFA00013A | Ken Alden   | 30-Sep-1983      |
|      |           | Comment changes only; for three items that moved              |                  |

from save to save all.

013 KFA00013 Ken Alden 13-Sep-1983  
 For DSRPLUS: Added SCA\_WRD\_PASS to the SCA\_PASS word [35]  
 and made SCA\_PASS into a bit.

012 KFA00012 Ken Alden 05-Jul-1983  
 added SCA\_FLAGS to the save list.

011 KFA00011 Ken Alden 15-Mar-1983  
 For DSRPLUS: added SCA[35] SCA\_PASS for flags passthrough  
 For DSR: Extended SAVE & RESTORE capability.

010 KAD00010 Keith Dawson 07-Mar-1983  
 Global edit of all modules. Updated module names, idents,  
 copyright dates. Changed require files to BLISS library.

100

## MACRO

|                  |            |  |
|------------------|------------|--|
| SCA_FC_UT        | = SCA[00]% | Save case rules here when exceptions are set up. |
| SCA_OC_UT        | = SCA[01]% | ...  |
| SCA_FC_LT        | = SCA[02]% | ...  |
| SCA_OC_LT        | = SCA[03]% | ...  |
| SCA_WRD_FC_UT    | = SCA[04]% | Case rules for current word.                     |
| SCA_WRD_FC_LT    | = SCA[05]% | ...  |
| SCA_WRD_OC_UT    | = SCA[06]% | ...  |
| SCA_WRD_OC_LT    | = SCA[07]% | ...  |
| SCA_FCBE_UT      | = SCA[08]% | Default case rules.                              |
| SCA_OCB_E_UT     | = SCA[09]% | ...  |
| SCA_FCBE_LT      | = SCA[10]% | ...  |
| SCA_OCB_E_LT     | = SCA[11]% | ...  |
| SCA_MNFC_UT      | = SCA[12]% | Save case rules here when exceptions are set up. |
| SCA_MNOC_UT      | = SCA[13]% | ...  |
| SCA_MNFC_LT      | = SCA[14]% | ...  |
| SCA_MNOC_LT      | = SCA[15]% | ...  |
| SCA_MNW RD_FC_UT | = SCA[16]% | Case rules for current word.                     |
| SCA_MNW RD_FC_LT | = SCA[17]% | ...  |
| SCA_MNW RD_OC_UT | = SCA[18]% | ...  |
| SCA_MNW RD_OC_LT | = SCA[19]% | ...  |
| SCA_MNFCBE_UT    | = SCA[20]% | Default case rules.                              |
| SCA_MNOCBE_UT    | = SCA[21]% | ...  |
| SCA_MNFCBE_LT    | = SCA[22]% | ...  |
| SCA_MNOCBE_LT    | = SCA[23]% | ...  |
| SCA_WORD_SET     | = SCA[24]% | TRUE if case rules set for a word only.          |

\*\*\*\*\*  
!Everything above this point is counted in SCA\_CASE\_SIZE.

|                 |             |   |
|-----------------|-------------|---|
| SCA_JUSTIFY     | = .SCA[25]% | !(SAVE)TRUE if text should be justified.                    |
| SCA_f JUSTIFY   | = SCA[25]%  | !(SAVE)TRUE if filling lines.                               |
| SCA_FILL        | = .SCA[26]% | !(SAVE ALL)TRUE if control characters allowed in input file |
| SCA_f FILL      | = SCA[26]%  | !(SAVE)See FJNFNJ for explanation.                          |
| SCA_CC_OK       | = .SCA[27]% | !(SAVE)The left margin.                                     |
| SCA_f CC_OK     | = SCA[27]%  | !(SAVE)The right margin.                                    |
| SCA_CROCK       | = .SCA[28]% | !(SAVE)1+number of blank lines between lines of text.       |
| SCA_f CROCK     | = SCA[28]%  | !(SAVE ALL)TRUE if double spacing after ".?!:;"             |
| SCA_LM          | = .SCA[29]% | !(SAVE)TRUE if empty records have significance.             |
| SCA_f LM        | = SCA[29]%  | !(SAVE ALL)Change bar character to be used if enabled.      |
| SCA_RM          | = .SCA[30]% | !(SAVE)TRUE if .AUTOTITLE is in effect.                     |
| SCA_f RM        | = SCA[30]%  | !(SAVE)TRUE if flags are enabled.                           |
| SCA_SPACING     | = .SCA[31]% |   |
| SCA_f SPACING   | = SCA[31]%  |   |
| SCA_PERIOD      | = .SCA[32]% |   |
| SCA_f PERIOD    | = SCA[32]%  |   |
| SCA_KER         | = .SCA[33]% |   |
| SCA_f KER       | = SCA[33]%  |   |
| SCA_BAR_CHAR    | = .SCA[34]% |   |
| SCA_f BAR_CHAR  | = SCA[34]%  |   |
| SCA_AUTOTITLE   | = .SCA[35]% |   |
| SCA_f AUTOTITLE | = SCA[35]%  |   |
| SCA_FLAGS       | = .SCA[36]% |   |
| SCA_f FLAGS     | = SCA[36]%  |   |

\*\*\*\*\* end of save area \*\*\*\*\*

|                |             |  |
|----------------|-------------|--|
| SCA_FC         | = SCA[37]%, | TRUE if first character on the line.   |
| SCA_NBITS      | = SCA[38]%, | SEE BELOW  |
| SCA_X_FLAG     | = SCA[39]%, | TRUE if in the middle of a sequence marked by the <INDEX flag>                 |
| SCA_FRC_CASE   | = SCA[40]%, | TRUE if case of current word was forced.                                       |
| SCA_CONT       | = SCA[41]%, | TRUE if user said .NO SPACE  |
| SCA_DO_NBITS   | = SCA[42]%, | SEE BELOW  |
| SCA_PRESCAN    | = SCA[43]%, | See SCANT for explanation  |
| SCA_HEADER     | = SCA[44]%, | Used by FLIP -- True if collecting a header level.                             |
| SCA_SECT_EMPTY | = SCA[45]%, | TRUE if nothing in current section.  |
| SCA_XROUTINE   | = SCA[46]%, | Indicates which routine to call for indexing:<br>FALSE ==> XR, TRUE ==> SUBXR. |

|                   |                    |   |
|-------------------|--------------------|---|
| %IF DSRPLUS %THEN |                    |   |
| SCA_PASS          | = (SCA[47])<0,1>%, | TRUE user is passing escape sequences.                      |
| SCA_WRD_PASS      | = (SCA[47])<1,1>%, | TRUE user is passing escape sequences along with this word. |
| SCA_MARGIN_PAD    | = (SCA[47])<8,8>%, | Number of spaces added at the beginning of MRA.             |

%IF

!

|     |                 |             |   |
|-----|-----------------|-------------|---|
| ... | SCA_WRD_NBITS   | = SCA[48]%, | SEE BELOW                                       |
|     | SCA_WRD_CNBITS  | = SCA[49]%, | SEE BELOW                                       |
|     | SCA_WRD_ACNBITS | = SCA[50]%, | SEE BELOW                                       |
|     | SCA_RSKTPS      | = SCA[51]%, | TRUE if multiple spaces/tabs are to be skipped. |

!

|     |              |             |  |
|-----|--------------|-------------|--|
| ... | SCA_FC_CASE  | = SCA[52]%, | TRUE if case rules to be used are those for the first character of a word. |
|     | SCA_INDEX    | = SCA[53]%, | TRUE if indexing commands are to be obeyed.                                |
|     | SCA_FRC_CHR  | = SCA[54]%, | True if current character should not be translated.                        |
|     | SCA_INDENT   | = SCA[55]%, | Pending indentation.   |
|     | SCA_PARA_PND | = SCA[56]%, | TRUE if a paragraph is pending.  |

...

Everything below this point refers to the word currently being scanned.

|       |                 |                     |  |
|-------|-----------------|---------------------|--|
| ***** | SCA_WRD_PNTR    | = SCA[62]%,         | A CH\$PTR to the first character of the word.        |
|       | SCA_WRD_INT_L   | = SCA[63]%,         | Internal representation size so far.                 |
|       | SCA_WRD_EXT_L   | = SCA[64]%,         | External size (i.e., print positions)                |
|       | SCA_WRD_ISEQN   | = SCA[65]%,         | Input line counter or record number.                 |
|       | SCA_WRD_DRAFT   | = SCA[66]%,         | TRUE if word is inside a /DRAFT area.                |
|       | SCA_WRD_DRAFT_F | = SCA[67]%,         | The draft flag for this word.                        |
|       | SCA_WRD_BARS    | = (SCA[68])<BAR->%, | TRUE if change bars associated with this word.       |
|       | SCA_WRD_BAR_CHR | = SCA[69]%,         | Use this character as the change bar.                |
|       | SCA_WRD_CPEND   | = SCA[70]%,         | Character being worked on.                           |
|       | SCA_WRD_SEQN_F  | = SCA[71]%,         | TRUE if SCA_WRD_ISEQN is an SOS style record number. |
|       | SCA_WRD_IPAGEN  | = SCA[72]%,         | Input page number.                                   |
|       | SCA_WRD_FOOTW   | = SCA[73]%,         | The number of footnotes attached to this word.       |
|       | SCA_WRD_F_XTN   | = SCA[74]%,         | First transaction number associated with this word.  |
|       | SCA_WRD_L_XTN   | = SCA[75]%,         | Last transaction number associated with this word.   |

...

|                             |  |
|-----------------------------|--|
| SCA_WRD_LST_HYP = SCA[80]%; | TRUE if word to end with a '-'.                          |
| SCA_WRD_HYP_PTR = SCA[81]%; | If SCA_WRD_LST_HYP is TRUE,<br>then a CHSPTR to the '-'. |
| SCA_WRD_LC_PNCT = SCA[82]%; | TRUE if last character was end-of-sentence punctuation.  |
| SCA_WRD_LST_SP = SCA[83]%;  | Number of spaces after last word.                        |
| SCA_WRD_LST_JUS = SCA[84]%; | True if justification mark after last word.              |
| SCA_WRD_LST_UND = SCA[85]%; | True if last space was underlined.                       |

LITERAL

|                     |   |
|---------------------|---|
| SCA_CASE_SIZE = 25; | Number of cells containing case information |
| SCA_SIZE = 96;      | Number of cells in entire SCA               |

LITERAL

|                      |                                       |
|----------------------|---------------------------------------|
| SCA_SAVE_START = 25; | Starting number of the SAVED SCA bits |
| SCA_SAVE_END = 36;   | Ending                                |

!NOTE\*\*\*\* For all fields having to do with underlining, bolding, etc, see ENDCHR, ENDWRD, OUTLIN, and DOFLG  
! to see how these fields get manipulated.

The bits defined by these macros get set to TRUE if SCANT is supposed to BoLD and/or UNDermine all characters it encounters. These bits get set/unset by things like ^& and \&, and .ENABLE/.DISABLE BOLDING, etc.

MACRO

|                                      |  |
|--------------------------------------|--|
| SCA_BLD = (SCA_NBITS)<BLD__>%;       |  |
| SCA_UND = (SCA_NBITS)<UND__>%;       |  |
| SCA_BLDUND = (SCA_NBITS)<BLDUND__>%; | ! Bolding and underlining<br>! as a set. |

The bits defined by these macros determine whether or not various flags have any effect. TRUE means that the corresponding function should be done when the flag is recognized, FALSE not.

These bits get set/cleared by commands such as .ENABLE/.DISABLE BOLDING, and so on. See FLGSEM, which sets these flags.

There is a difference between SCA XXX and SCA DO XXX. The former indicates whether or not the XXX type of emphasis has been turned on by a construct such as ^&. The latter indicates whether or not the emphasis called for by XXX should really be done. In particular, consider the following sequence:

00100 .ENABLE UNDERLINING;^&  
00200 This text will be underlined because both .ENABLE UNDERLINING and ^&  
00300 were specified. But  
00400 .DISABLE UNDERLINING; this text (after the ";") will not be underlined  
00500 because the .DISABLE UNDERLINING command indicates it should not be  
00600 done. Or, perhaps more interesting is the fact that even  
00700 &t&h&e&s&e &t&w&o &w&o&r&d&s will not be underlined whereas  
00800 .ENABLE UNDERLINING; these two words\& will be underlined, but nothing  
00900 after the \& sequence.

!See FLGSEM

MACRO

|  |                                     |
|--|-------------------------------------|
| SCA_DO_BLD = (SCA_DO_NBITS)<BLD__>%;       |                                     |
| SCA_DO_UND = (SCA_DO_NBITS)<UND__>%;       |                                     |
| SCA_DO_BLDUND = (SCA_DO_NBITS)<BLDUND__>%; | ! Bolding and underlining as a set. |
| SCA_DO_OVR = (SCA_DO_NBITS)<OVR__>%;       |                                     |
| SCA_DO_IND = (SCA_DO_NBITS)<IND__>%;       |                                     |
| SCA_DO_HYP = (SCA_DO_NBITS)<HYP__>%;       |                                     |

MACRO

! The fields defined here are accumulated for an entire word.  
 ! They get cleared at the start of a new word.

```
SCA_WRD_BLD      = (SCA_WRD_NBITS)<BLD-->%,
SCA_WRD_UND      = (SCA_WRD_NBITS)<UND-->%,
SCA_WRD_BLDUND   = (SCA_WRD_NBITS)<BLDUND>%,. !Bolding and underlining as a set
SCA_WRD_OVR      = (SCA_WRD_NBITS)<OVR-->%;
```

## MACRO

! The fields defined here get set just before a new character  
 is picked up. They are inherited from the global environment  
 ! in effect at that time.

```
SCA_WRD_C_BLD    = (SCA_WRD_CNBITS)<BLD-->%,
SCA_WRD_C_UND    = (SCA_WRD_CNBITS)<UND-->%,
SCA_WRD_C_BLDUND = (SCA_WRD_CNBITS)<BLDUND>%,. !Bolding and underlining as a set
SCA_WRD_C_OVR    = (SCA_WRD_CNBITS)<OVR-->%;
```

## MACRO

! The fields defined here get set as various functions are  
 requested, on a once-only basis (e.g., single character underline, &x). These fields, together with  
 the previous three fields, determine what functions have been  
 ! requested for a specific character.

```
SCA_WRD_AC_BLD   = (SCA_WRD_ACNBITS)<BLD-->%,
SCA_WRD_AC_UND   = (SCA_WRD_ACNBITS)<UND-->%,
SCA_WRD_AC_BLUND = (SCA_WRD_ACNBITS)<BLDUND>%,. !Bolding and underlining as a set
SCA_WRD_AC_OVR   = (SCA_WRD_ACNBITS)<OVR-->%;
```

## MACRO

```
SCA_DEFINITION =
  VECTOR[SCA_SIZE]%;
```

## \$FIELD H\_R\_SCA\_FIELDS =

```
SET
H_R_SG_SCA_JUSTIFY      = [$INTEGER],
H_R_SG_SCA_FILL          = [$INTEGER],
H_R_SG_SCA_CC_OK         = [$INTEGER],
H_R_SG_SCA_CROCK         = [$INTEGER],
H_R_SG_SCA_LM             = [$INTEGER],
H_R_SG_SCA_RM             = [$INTEGER],
H_R_SG_SCA_SPACING        = [$INTEGER],
H_R_SG_SCA_PERIOD          = [$INTEGER],
H_R_SG_SCA_KER             = [$INTEGER],
H_R_SG_SCA_BAR_CHAR        = [$INTEGER],
H_R_SG_SCA_AUTOTITLE       = [$INTEGER],
H_R_SG_SCA_FLAGS            = [$INTEGER]
TES;
```

## LITERAL

```
H_R_SCASK_LENGTH = $FIELD_SET_SIZE;
```

## LITERAL

```
MAX_H_R_SCA = 3;           !This means there are a maximum of 3 concurrent PUSH_SCAs.
```

## MACRO

```
$H_R_SCA_BLOCK =
```

BLOCK [H\_R\_SCA\$K\_LENGTH] FIELD (H\_R\_SCA\_FIELDS) %;

MACRO

PUSH\_SCA =

```
BEGIN
  PP_SCA [ H_R$G_SCA_JUSTIFY ] = .SCA_JUSTIFY;
  PP_SCA [ H_R$G_SCA_FILL ] = .SCA_FILL;
  PP_SCA [ H_R$G_SCA_CC_OK ] = .SCA_CC_OK;
  PP_SCA [ H_R$G_SCA_CROCK ] = .SCA_CROCK;
  PP_SCA [ H_R$G_SCA_LM ] = .SCA_LM;
  PP_SCA [ H_R$G_SCA_RM ] = .SCA_RM;
  PP_SCA [ H_R$G_SCA_SPACING ] = .SCA_SPACING;
  PP_SCA [ H_R$G_SCA_PERIOD ] = .SCA_PERIOD;
  PP_SCA [ H_R$G_SCA_KER ] = .SCA_KER;
  PP_SCA [ H_R$G_SCA_BAR_CHAR ] = .SCA_BAR_CHAR;
  PP_SCA [ H_R$G_SCA_AUTOTITLE ] = .SCA_AUTOTITLE;
  PP_SCA [ H_R$G_SCA_FLAGS ] = .SCA_FLAGS
END
%;
```

!!!

MACRO

POP\_SCA =

```
BEGIN
  SCA_JUSTIFY = .PP_SCA [ H_R$G_SCA_JUSTIFY ];
  SCA_FILL = .PP_SCA [ H_R$G_SCA_FILL ];
  SCA_CC_OK = .PP_SCA [ H_R$G_SCA_CC_OK ];
  SCA_CROCK = .PP_SCA [ H_R$G_SCA_CROCK ];
  SCA_LM = .PP_SCA [ H_R$G_SCA_LM ];
  SCA_RM = .PP_SCA [ H_R$G_SCA_RM ];
  SCA_SPACING = .PP_SCA [ H_R$G_SCA_SPACING ];
  SCA_PERIOD = .PP_SCA [ H_R$G_SCA_PERIOD ];
  SCA_KER = .PP_SCA [ H_R$G_SCA_KER ];
  SCA_BAR_CHAR = .PP_SCA [ H_R$G_SCA_BAR_CHAR ];
  SCA_AUTOTITLE = .PP_SCA [ H_R$G_SCA_AUTOTITLE ];
  SCA_FLAGS = .PP_SCA [ H_R$G_SCA_FLAGS ]
END
%;
```

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!

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